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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/059,140	01/31/2002	Jarmo Parkkinen	3502-1004	5989

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EXAMINER	
LU, KUEN S	

ART UNIT	PAPER NUMBER
2177	

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/059,140	PARKKINEN, JARMO	
	Examiner	Art Unit	
	Kuen S Lu	2177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/1-31-2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on January 31, 2002 was filed on the fling date of the Application 10/059,140 on January 31, 2002. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the IDS (Information Disclosure Statement) is considered by the examiner.

Claim Objections

2. The claims 1-42 are objected to because the lines are crowded too closely together, making reading and entry of amendments difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

Claims 1 and 13 are objected to because of the following informalities: the limitations starting with '-' is improper. The '-' symbol should be removed from each limitation.

Specification

3. The spacing of the lines of the Abstract is such as to make reading and entry of amendments difficult. New Abstract paper with lines double spaced on good quality paper are required.

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the term "invention" appears in the Abstract. The term misleads readers of the Application as an invention at this stage. The Abstract contains numerical references which are not allowed.

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-9, 11-21, 23-29, 32-38 and 41-42 are rejected are rejected under U.S.C. 102(b) as anticipated by Orarep (Oracle7™ Server Distributed Systems, Volume II: Replicated Data, Release 7.3, Volume II, February 1996, Part No. A32545-2, ORACLE®, hereafter "Orarep").

As per claims 13, 34, 26 and 1, Orarep teaches "serially aligning database transactions comprising at least two databases coupled to their associated database management systems" by showing two master sites are replicated masters (Page 1-11) for serially aligning database transactions (Page 8-14), "comprising steps, in which the first transaction is initiated in the first database, at least one transaction trigger including attributes is linked into said first transaction, said first transaction is ended in the first database" at Page 4-24 where site triggers are created which are invoked in the site A first, "is characterized in that, it further comprises step, in which at least one said trigger

is fired in at least one first database" by database updating, deleting and inserting transactions (Page 4-24), "and at least one second transaction is initiated to synchronize data in at least one second database from at least one first database according to at least some of the attributes in the trigger " at Page 4-24 where remote procedures are created and triggered to invoke database transactions at the Site B and vice versa because both Sites A and B are replicated masters. Note the synchronization is a two-way replication data from each of the two sites to each other. At Page 1-13, Fig. 1-6 shows the trigger generated and its attributes stored to the deferred transaction queue before remote procedures call is forwarded.

As per claims 14 and 35, Orarep teaches "the set of data of the second transaction comprises data for performing push-style or push-pull-style synchronization" at Page 1-4 where the master site propagates, or pushes its changes to every other master sites for the replication group for the master-initiated and at Page 4-26 by manually pushing the changes made at a given master site by calling the EXECUTE procedure to forward any changes made since the last time changes were propagated from the site, either manually or automatically.

As per claims 15 and 2, Orarep teaches "characterized in that the said trigger is a deferred database operation defined for at least one data manipulation operation" at Pages 1-11 and 1-12 where trigger builds deferred procedure call to a packaged procedure at the remote site.

As per claims 16 and 3, Orarep teaches "characterized in that the execution of the second transaction is blocked until the said trigger fires" at Page 1-12 where a first

master site database fires trigger as local database change occurs. The trigger builds a remote procedure call to a packaged procedure at site B. It is thus transaction is blocked until the trigger fires and remote procedures is called to a second master site B.

As per claims 17, 36, 27 and 4, Orarep teaches "a database system comprises at least one master database and at least one replica database, the push synchronization data between the master and replica databases is master-initiated and pull synchronization data between the master and replica databases is replica-requested" at Page 1-4 where the master site propagates, or pushes its changes to every other master sites for the replication group for the master-initiated and at Page 4-26 by manually pushing the changes made at a given master site by calling the EXECUTE procedure to forward any changes made since the last time changes were propagated from the site, either manually or automatically.

As per claims 18, 37, 28 and 5, Orarep teaches "transactionally consistent set of data in a database comprises configuration data" at Page 4-30 when a local database change occurs, a trigger is fired to build deferred calls to generate procedures at the remote site and at Page 8-17 user procedure wrappers to build deferred transactions including configuration data showing the database objects to support the database data changes.

As per claims 19 and 6, Orarep teaches "the device changes its configuration to reflect the changed data right after the data has committed in the database" at Page 1-15 where changes must be replicated to all replicated sites, or rollback occurs to restore the databases back to a consistent state prior to the change.

As per claims 20 and 7, Orarep teaches "the related software processes, like other database server or a client application, are informed about transactional changes by the data management server" at Page 13-15 where DefTran view records all deferred transactions.

As per claims 21 and 8, Orarep teaches "the method executes tasks and operations in a database transaction context" at Page 4-26 where local database change fires triggers to build deferred calls to generate procedures at the remote master sites, procedural replication uses procedures to build deferred transaction and propagation of of deferred transactions is controlled by job queue processes. The steps as described are all in the database transaction context.

As per claims 25 and 9, Orarep teaches "transactions are executed in separate database connections or in a shared connection with another said transaction or another transaction" at Page 4-26 where local database change fires triggers to build deferred calls to generate procedures at the remote master sites, procedural replication uses procedures to build deferred transaction and propagation of deferred transactions is controlled by job queue processes.

As per claims 29 and 38, Orarep teaches "at least the second database can be part of a router coupled to the application" at Page 1-2 where a second database is replicated with data changes originated from a first database, and the changed data is available for application connecting to a second datanbase.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained although the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 10, 22, 30-31 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orarep (Oracle7™ Server Distributed Systems, Volume II: Replicated Data, Release 7.3, Volume II, February 1996, Part No. A32545-2, ORACLE®, hereafter "Orarep"), as applied to claims 1-9, 11-21, 23-29, 32-38 and 41-42, and further in view of Oranet (Oracle® Advanced Networking Option™, Administrator's Guide, Release 2.3.3, Part No. A48511-1, ORACLE®, 1996, hereafter "Oranet").

As per claims 22, 40, 31 and 10, Orarep does not specifically teach "method is compatible with at least one of the following communication specifications: TCP/IP, CDMA, GSM, HSCSD, GPRS, WCDMA, EDGE, UMTS, Bluetooth, Teldesic, Iridium, Inmarsat, WLAN, DIGI-TV and imode", although Orarep teaches a generic network as a compatible configuration for database replication system at Fig. 1-1 in Page 1-2.

However, Oranet teaches "method is compatible with at least one of the following communication specifications: TCP/IP, CDMA, GSM, HSCSD, GPRS, WCDMA, EDGE, UMTS, Bluetooth, Teldesic, Iridium, Inmarsat, WLAN, DIGI-TV and imode" at Page 14-2 by showing TCP/IP protocol is utilized for database network.

It would have been obvious to one having ordinary skill in the art at the time of the

applicant's invention was made to combine Oranet's reference into Orarep's by combining the advanced Oracle network option into replicated database system because the replication system is built on a generic network (Orarep: Page 1-2) and the Oracle network option is implemented on TCP/IP protocol. The combination of the references would have implemented the replication database system on a most scalable communication protocol known to ordinary skilled in the art.

As per claims 23, 41, 32 and 11, Oranet further teaches "compatible with at least one of the following operating systems and is used in at least one terminal including an application, replica database of the database system Unix, MS-Windows, EPOC, NT, MSCE, Linux, PalmOS, GEOS, VxWorks, Pocket PC and any upgrade of these" at Page 6-3 by describing UNIX as a database server platform.

As per claims 24, 42, 33 and 12, Oranet further teaches "at least one of the following operating systems is used in at least one server including an application master database of the database system: Unix, MS-Windows, VxWorks, NT and Linux and any upgrade of these" at Page 6-3 by describing UNIX as a database server platform.

As per claims 30 and 39, Oranet further teaches "a storage medium is a memory and/or a disk" at Page 17-5 by showing disk or tape is utilized for saving database objects.

Conclusions

5. The prior art made of record

   U. Oracle7™ Server Distributed Systems, Volume II: Replicated Data, Release 7.3, Volume II, February 1996, Part No. A32545-2, ORACLE®

V. Oracle® Advanced Networking Option™, Administrator's Guide, Release 2.3.3, Part No. A48511-1, ORACLE®, 1996

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. U.S. Publication 2003/0208511

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is 703-305-4894. The examiner can normally be reached on 8 AM to 5 PM, Monday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Kuen S. Lu
Patent Examiner

May 27, 2004

SRIRAMA CHANNAVAJJALA
PRIMARY EXAMINER